

Title (en)
SCANNING ENDOSCOPE APPARATUS

Title (de)
ABTASTENDE ENDOSKOPVORRICHTUNG

Title (fr)
DISPOSITIF D'ENDOSCOPE À BALAYAGE

Publication
EP 3132737 A1 20170222 (EN)

Application
EP 15878849 A 20150831

Priority

- JP 2015008861 A 20150120
- JP 2015074727 W 20150831

Abstract (en)

A scanning endoscope apparatus is provided that includes: a scanning endoscope having a light guide portion for guiding an illuminating light for illuminating a subject and emitting the illuminating light from an emitting end, and an actuator configured to oscillate the emitting end of the light guide portion in accordance with a voltage of a signal applied to the actuator in order to scan the illuminating light over the subject; a storage portion configured to store in advance, as information regarding a frequency of the signal applied to the actuator, information regarding a resonance frequency at a time when the emitting end of the light guide portion is caused to oscillate in a resonant state; an application portion configured to sequentially apply a plurality of signals having different frequencies to the actuator; a signal monitoring portion configured to monitor the plurality of signals that are sequentially applied to the actuator; and a determination portion configured to compare information regarding a frequency of a signal at a time when impedance is smallest in a case where the actuator is taken as a load among the plurality of signals monitored by the signal monitoring portion with the information regarding the resonance frequency stored in the storage portion to determine whether or not the scanning endoscope is abnormal.

IPC 8 full level
A61B 1/00 (2006.01); **G02B 23/24** (2006.01)

CPC (source: EP US)
A61B 1/00 (2013.01 - US); **A61B 1/00006** (2013.01 - EP US); **A61B 1/00057** (2013.01 - EP US); **A61B 1/00096** (2013.01 - EP US);
A61B 1/00172 (2013.01 - EP US); **A61B 1/0669** (2013.01 - EP US); **A61B 1/07** (2013.01 - EP US); **G02B 23/24** (2013.01 - EP US)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3132737 A1 20170222; EP 3132737 A4 20180131; CN 106231977 A 20161214; CN 106231977 B 20180807; JP 5981071 B1 20160831;
JP WO2016117160 A1 20170427; US 10034599 B2 20180731; US 2017065154 A1 20170309; WO 2016117160 A1 20160728

DOCDB simple family (application)
EP 15878849 A 20150831; CN 201580020558 A 20150831; JP 2015074727 W 20150831; JP 2016507325 A 20150831;
US 201615356542 A 20161119